

## REMARKS

The application includes claims 30-57 prior to entering this amendment.

The examiner rejected claims 30 and 40 under 35 U.S.C. § 102(b) over Murakami.

The examiner rejected claims 30-37, 40-46, and 48-57 under 35 U.S.C. § 103(a) over Applicant Admitted Prior Art (hereinafter, the AAPA) and in view of Murakami, *et al.* (U.S. Patent No. 4,460,939).

The examiner rejected claims 38, 39, 47, 48, 56, and 57 under 35 U.S.C. § 103(a) over the AAPA, in view of Murakami and Vent (U.S. Patent No. 5,489,457).

The applicant amends claims 30-31, 33-36, and 38-48.

The applicant cancels claims 50-57.

The applicant adds new claims 58-65.

The application remains with claims 30-49 and 58-65 after entering this amendment.

The applicant adds no new matter and requests reconsideration in view of the following remarks. The applicant points out that the claimed subject matter may be patentably distinguished from the cited reference(s) for multiple reasons; however, the following remarks are believed to be sufficient. Likewise, it is noted that the applicant's failure to comment directly on any of the positions asserted by the examiner in the office action does not indicate agreement or acquiescence with those asserted positions.

## Telephone Interview Summary

The applicant thanks Examiner Safaipour for his time in a phone interview on Feb. 6, 2008 with Earl T. Cohen. During the interview, independent claims 30 and 40 and distinguishing features thereof were discussed. No agreement was reached during the interview. The examiner requested that support be identified for the amendment to claim 40, which Applicant has identified below.

## Claim Rejections Under 35 U.S.C. § 102 and 35 U.S.C. § 103

The examiner rejected claims 30 and 40 under 35 U.S.C. § 102(b) over Murakami.

The examiner rejected claims 30-37, 40-46, and 48-57 under 35 U.S.C. § 103(a) over the AAPA and in view of Murakami.

The examiner rejected claims 38, 39, 47, 48, 56, and 57 under 35 U.S.C. § 103(a) over the AAPA, in view of Murakami and Vent.

Claim 30:

Claim 30 recites (emphasis added):

*a plurality of reflection planes, each of the reflection planes formed on a corresponding one of the inside walls and covering only a portion of the corresponding inside wall;*

*a reflective plating film directly formed on at least a portion of each of the plurality of reflection planes to reflect light; and*

*wherein the reflective plating film is not formed on at least some portions of the plurality of inside walls.*

The examiner alleges in both the 102 and the 103 rejection of claim 30, that Murakami discloses:

a hollow shell (5) which its internal surfaces 2a and 3a are coated [directly] with a mirror like reflecting layer (fig. 3, col. 2 lines 58-64). Murakami further discloses a hollow shell (5) with two mirrors (reflecting planes) (10 & 11) formed on the shell 5 for reflection of the light rays (fig. 5 col. 3 lines 32-49).<sup>1</sup>

With regard to Murakami's cylindrical reflecting member 3 and elliptical reflecting member 2 (having internal surfaces 3a and 2a), the applicant points out that Murakami teaches that the *entirety* of the internal surfaces of the cylindrical reflecting member 3 and of the elliptical reflecting member 2 are coated with a reflecting layer:

the internal surfaces 2a and 3a of members 2 and 3 are coated with a mirror-like reflecting layer.<sup>2</sup>

Coating the entirety of the internal surfaces is inherent in Murakami's invention, as doing otherwise would cause some light that would otherwise be reflected to be lost, and one or more of Murakami's stated objectives of "uniform intensity of illumination"<sup>3</sup>, "high efficiency of illumination"<sup>4</sup>, and "simple in structure and low in cost"<sup>5</sup> would be sacrificed.

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<sup>1</sup> Office Action, page 2 (rejection under 35 U.S.C. 103), and page 6 (rejection under 35 U.S.C. 102).

<sup>2</sup> Murakami, col. 2, lines 40-41.

<sup>3</sup> Murakami, col. 1, line 35.

<sup>4</sup> Murakami, col. 1, lines 38-39.

<sup>5</sup> Murakami, col. 1, lines 44-45.

The examiner, during the telephone interview, noted that Murakami's "end face 6 of light guide 5" is not coated. The applicant refers the examiner to the following teaching of Murakami:

Cylindrical member 4 [sic] has a straight narrow aperture 4 in the shape of a slot, in which the end of a plate-like light guide 5 is firmly secured, for instance by cementing, in such a manner that the end face 6 of light guide 5 is disposed in one of the two focal planes F1 and F2 of elliptical member 2.<sup>6</sup> (emphasis added)

The applicant notes the typographic error in the text in that the "cylindrical member" is reference ID 3, and the aperture is reference ID 4. Murakami's cylindrical member is coated everywhere except where there is a hole (aperture) in the cylindrical member.

The applicant's claim 30 recites that "each of the reflection planes" be "formed on a corresponding one of the inside walls and covering only a portion of the corresponding inside wall," that "a reflective plating film" be "directly formed on at least a portion of each of the plurality of reflection planes," and "wherein the reflective plating film is not formed on at least some portions of the plurality of inside walls" (emphasis added). This feature is neither taught nor suggested in Murakami, since Murakami has no single piece in his illumination device which is only partially coated.

With regard to Murakami's Fig. 5, respectfully, the examiner is misconstruing Fig. 5. The applicant points out that Fig. 5 illustrates not just Murakami's shell 5, but also Murakami's cylindrical reflecting member 3 and elliptical reflecting member 2. Further, Murakami describes:

FIG. 5 shows how to capture the light that would otherwise pass from the ends of body 1, by providing side mirrors 10 and 11 one at each end of body 1.<sup>7</sup>

Murakami's body 1 is the combination of Murakami's cylindrical reflecting member 3 and elliptical reflecting member 3. Further, Murakami's use of mirrors is "one at each end" of Murakami's *open* body. Murakami's mirrors 10 and 11 are not described as being formed on or as part of Murakami's body, and thus the teachings of Murakami regarding mirrors 10 and 11 would seem to be more applicable to the AAPA than to the applicant's claims.

Accordingly, as Murakami alone does not anticipate the applicant's claim 30, and as none of the cited references, either alone or in combination, teach or suggest all of the features of claim 30, claim 30 is in condition for the examiner's allowance for at least this reason.

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<sup>6</sup> Murakami, col. 2, lines 48-53.  
AMENDMENT

Claim 34:

Claim 34 has been re-written in independent form by incorporating all of the features of independent claim 30, and is otherwise unamended from the previously presented version.

Claim 34 recites (emphasis added):

*wherein the shell body further comprises a lid body and a major body, wherein the lid body and the major body are formed as separate pieces and subsequently assembled.*

With regard to claim 34, the examiner alleges:

For claim 34, which is representative of claims 43 and 52, Applicant's admitted prior art teaches wherein the shell body further comprised a lid body and a major body, wherein the lid body and the major body are formed as separated pieces and subsequently assembled (See Fig 1).<sup>8</sup>

Respectfully, the examiner is misconstruing the AAPA. The referenced Fig. 1 “is a three-dimension illustration for a preferable embodiment of the prior optical scanner.”<sup>9</sup> Fig. 2 “is an A-A cross-section-view diagram for an optical chassis of the prior optical scanner in FIG. 1.”<sup>10</sup> Neither Fig. 1 nor Fig. 2 illustrate, nor does the AAPA describe, a “shell body” that “further comprises a lid body and a major body.” Various portions of the application as filed, such as column 3 lines 24-32 and Figs. 6 and 7, provide teachings regarding a lid body and a major body.

Accordingly, as none of the cited references, either alone or in combination, teach or suggest all of the features of claim 34, claim 34 is in condition for the examiner’s allowance for at least this reason.

Claim 40:

Claim 40 recites (emphasis added):

*forming a shell body having a plurality of inside walls defining an accommodation space, the shell body configured to mount a lens set within the shell body;*

*forming a plurality of reflection planes on respective ones of the inside walls;*

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<sup>7</sup> Murakami, col. 3, lines 44-46.

<sup>8</sup> Office Action, page 3.

<sup>9</sup> Application as filed, page 4, lines 23-24.

<sup>10</sup> Application as filed, page 4, lines 25-26.

*depositing a plating film directly on at least a portion of each of the plurality of reflection planes, the deposited plating films being capable of reflecting light; and wherein a thickness of the deposited plating film is relatively greater on the one of the plurality of reflection planes that is optically closest to the lens set.*

Support for amended claim 40 is found in the application as filed, for example on page 7, lines 18-20.

Claim 40 stands rejected, for both the 102 and the 103 rejection, with the same grounds as claim 30. Accordingly, the comments on the rejections (such as the applicability of Murakami's Fig. 5) above apply equally to claim 40.

The applicant's claim 40 requires "wherein a thickness of the deposited plating film is relatively greater on the one of the plurality of reflection planes that is optically closest to the lens set" (emphasis added), and this feature is neither taught nor suggested in Murakami. Murakami has no teachings regarding a thickness of Murakami's coating, let alone that the coating thickness is non-uniform. Further, Murakami teaches away from using his invention with a system containing a lens system:

Still another object of the present invention is the provision of such a device, which functions without a lens system.<sup>11</sup>

Accordingly, as Murakami alone does not anticipate the applicant's claim 40, and as none of the cited references, either alone or in combination, teach or suggest all of the features of claim 40, claim 40 is in condition for the examiner's allowance for at least this reason.

#### Other Dependent Claims:

As dependent claims 31-33, 35-39, and 41-49 incorporate all of the features of their respective independent claim, and as the independent claims are allowable per the remarks above, dependent claims 31-33, 35-39, and 41-49 are also in condition for the examiner's allowance for at least this reason.

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<sup>11</sup> Murakami, col. 1, lines 40-42.  
AMENDMENT

### **New Claims**

New independent claim 58 has similar features as independent claim 30. Accordingly, at least for the reasons explained above with regard to independent claim 30, independent claim 58 is also in condition for the examiner's allowance for at least this reason.

New dependent claims 59-64 and 65 are dependent on a respective one of independent claims 58 and 30. As independent claims 58 and 30 are allowable per the remarks above, dependent claims 59-64 and 65 are also in condition for the examiner's allowance for at least this reason.

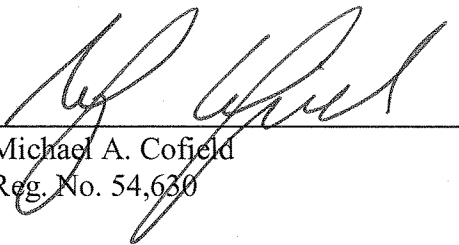
### Conclusion

For the foregoing reasons, the applicant requests reconsideration and allowance of the remaining claims. The applicant encourages the examiner to telephone the undersigned at (503) 224-2170 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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